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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,579	01/25/2002	Mohamed S. Hamed	CAEP:101_US_	4685

24041 7590 12/11/2003  
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EXAMINER

PHAM, MINH CHAU THI

ART UNIT PAPER NUMBER

1724

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/056,579

Applicant(s)

HAMED ET AL.

Examiner

Minh-Chau T. Pham

Art Unit

1724

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

***Specification***

1. The abstract of the disclosure is objected to because legal phraseology "comprises" is used in the abstract. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crafton (5,829,509; 20 & 22 in Fig. 1A; col. 1, line 60 through col. 2, line 9; col. 4, lines 10-31; col. 5, lines 36-46), in view of Chawla (6,224,654 B1; Abstract; 9, 10, 12 & 13 in Fig. 1; col. 2, line 37 through col. 3, line 6).

Crafton discloses a thermal sand oven comprising means to move air through the oven wherein the air stream traverses the metal casting encased in the sand mold.

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Claims 1-10 differ from the disclosure of Crafton in that the apparatus has a plurality of sand removal members projecting into the air stream. Chawla discloses a plurality of members projecting into the dust laden air stream wherein each removal member comprises two planar members (10 and 12) joined to form a "V" shaped structure wherein each structure includes a vertex pointing generally in the direction of the air stream (see Fig. 1). Chawla further discloses the planar members joined at an angle of 45 degrees and the angle may also vary (see col. 2, lines 48-50). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a plurality of members projecting into the dust laden air stream as taught by Chawla in the sand oven of Crafton because the planar members in angled position would divide the gas stream into multiple gas streams that cross each other and collide thereby causing vortices of gases to be formed by the transfer of momentum between multiple gas streams and the dust particles in the dust laden gas stream could be collected.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Cary (4,300,918) discloses a method for removing moisture particles.
- Albritton et al (4,999,037) disclose a louver assembly.
- Pearl (5,378,265) discloses an apparatus for removing foreign particles for air.
- Wurz et al (5,389,127) disclose a method of cleaning a drop separator.

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- Plaks et al (6,152,988) disclose an electrostatic precipitation filter.
- Kinsel (6,468,321 B2) discloses a gas cleaning system
- Crafton (5,957,188) discloses a heat treating castings and sand.
- Parenti (4,869,737) discloses an apparatus for cleaning air in coal mines.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (703) 308-1605. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (703) 308-1261. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



**Minh-Chau Pham**  
**Patent Examiner**  
December 5, 2003